ABSTRACT:

An implant includes a pressure sensor, a controller for acquiring pressure data from the sensor, and an acoustic transducer for converting energy between electrical energy and acoustic energy. A capacitor is coupled to the acoustic transducer for storing electrical energy converted by the transducer and/or for providing electrical energy to operate the implant. The acoustic transducer may operate alternatively or simultaneously as an energy exchanger or an acoustic transmitter. During use, the implant is implanted within a patient's body, and an external transducer transmits a first acoustic signal into the patient's body, to energize the capacitor. The implant then obtains pressure data, and transmits a second acoustic signal to the external transducer, the second acoustic signal including the pressure data.